ChemRisk Document No. 1296

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Date ~~June 7, 1950~~

File

Subject Gross Beta and Gamma Activities of Dissolver Solution.

Those Eligible To Read The Attached

By S. A. Reynolds

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C Witkowski
901

To M. T. Kelley

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TO LOCATION: M. T. Kelley — DATE: June 9, 1950

ATTENTION: H. J. McAlduff
COPY TO: Col. McCormick for Lt. W. E. Carr; L. B. Emlet; E. J. Witkowski; S. A. Reynolds file

SUBJECT: Gross Beta and Gamma Activities of Dissolver Solution.

The gross beta and gamma activities of a typical sample of ORNL dissolver solution (fission iodine process) were determined in order to evaluate the extent of settling basin contamination caused by the Army laundry program in July.

The beta activity was determined by counting a suitable aliquot dried on a one-inch watch glass and supported on the second shelf of the standard counter. The counting efficiency of this arrangement is about 10%. This simulates adequately the conditions of measurement of settling basin beta activity. Decay was followed for two weeks. The figure shows nominal millicuries per milliliter as a function of time after pile discharge.

The gamma activity was measured by means of the gamma ionization chamber. The activity was calculated as 1 Mev photons (see figure).

S. A. Reynolds

SAR:ko

DECLASSIFIED

Classification changed to: Unclassified (level and category)

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ADC or ADD signature (first reviewer) 4/11/94 Date

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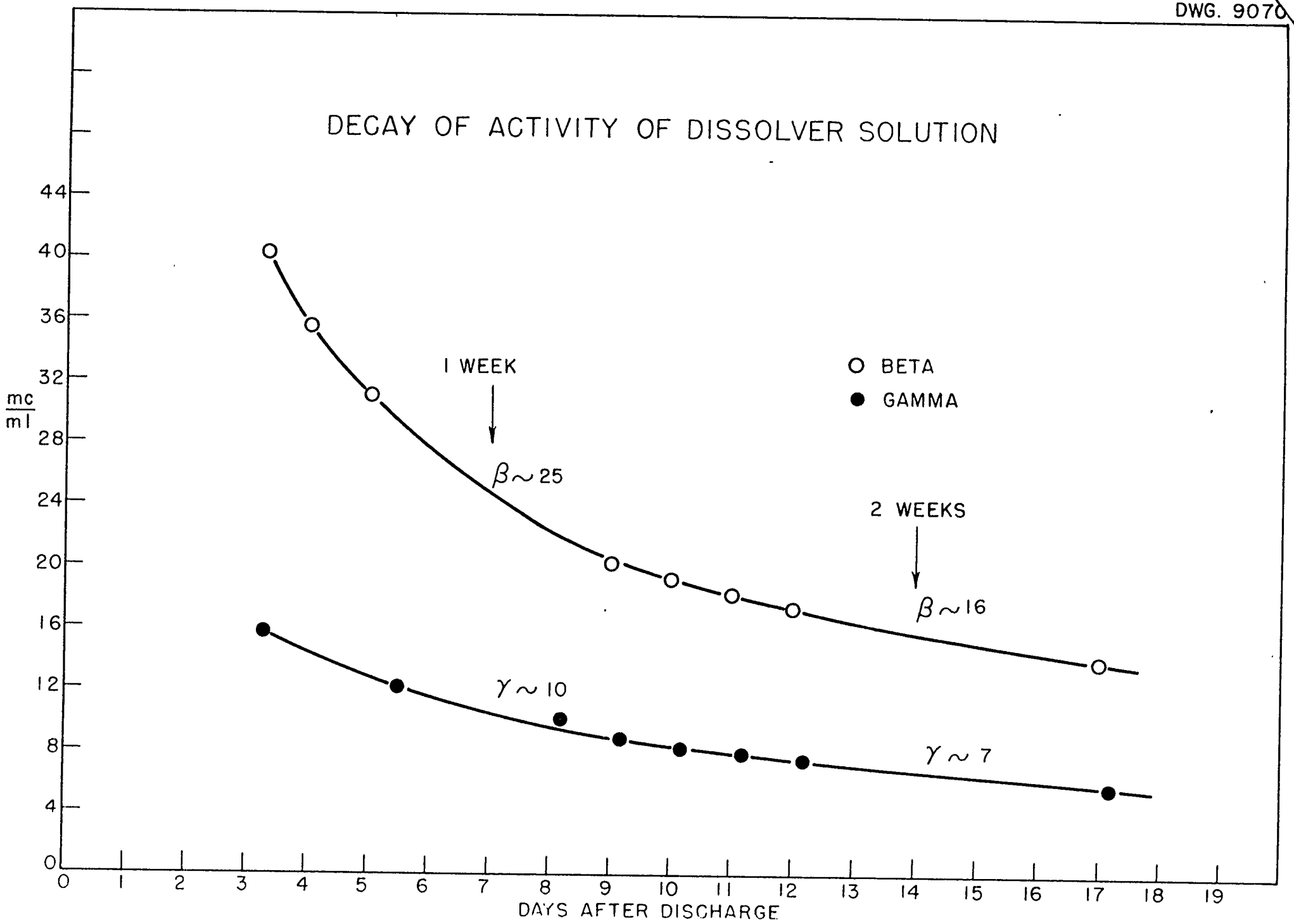

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Dup

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CLASSIFICATION CANCELLED

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Single rereview of CCRP-declassified documents was authorized by DOE Office of Declassification memo of August 22, 1994.

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TO [redacted] DATE June 9, 1950

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By [redacted] Date [redacted] ANSWERING LETTER DATE

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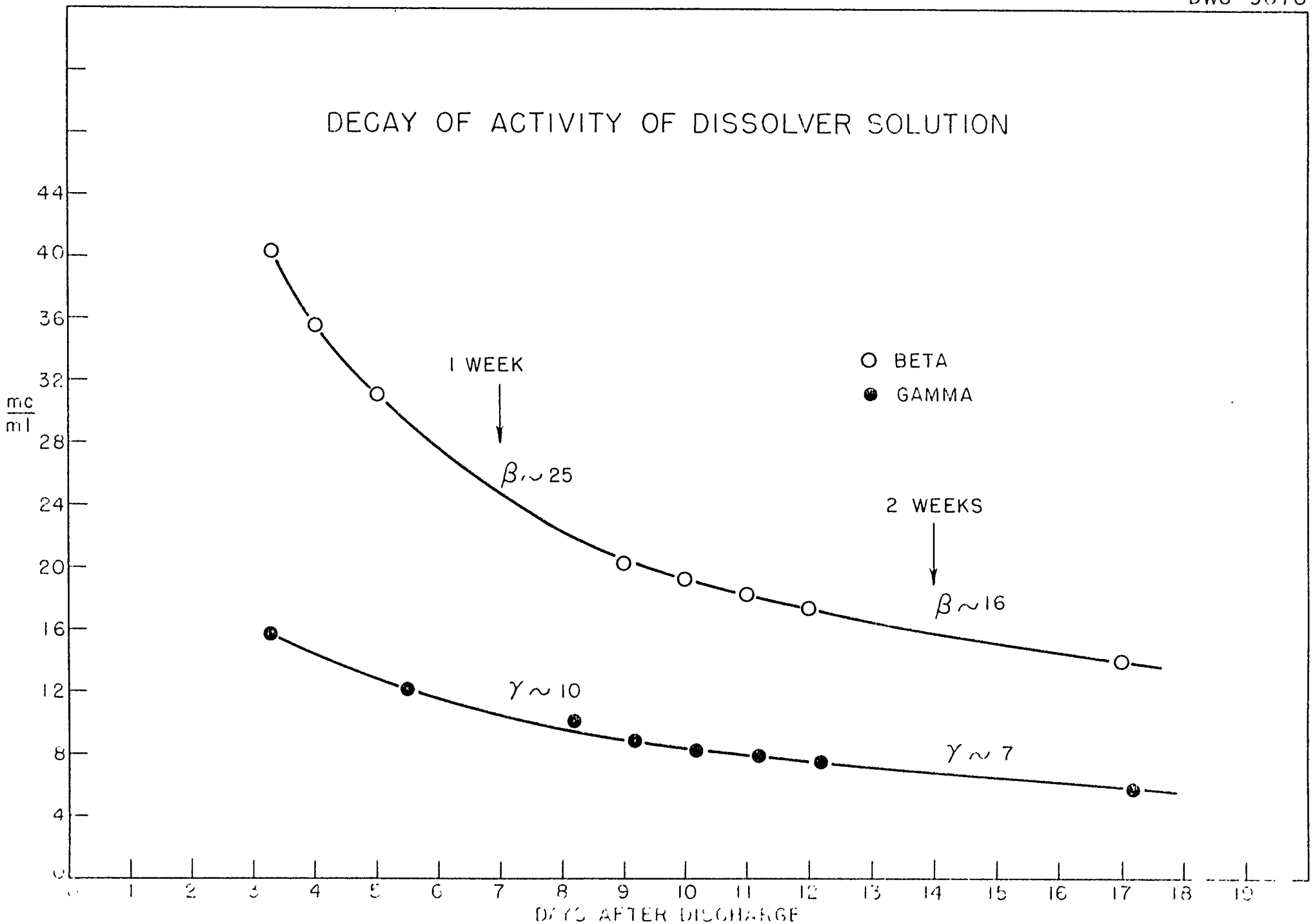
DECAY OF ACTIVITY OF DISSOLVER SOLUTION
mc/ml
44
40
36
32
28
24
20
16
12
8
4
0
1 WEEK
2 WEEKS
O BETA
GAMMA
β ~ 25
β ~ 16
γ ~ 10
γ ~ 7
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
DAYS AFTER DISCHARGE